

# Thermohygrometer (analogue, digital and radio outputs )



- ▶ 4...20 mA, RS485-Modbus RTU and Radio outputs version
- ▶ Easy installation of the sensitive part, even in small spaces or pipes
- ▶ Cable length from 5 to 100 m
- ▶ Dew Point calculation and output (replace RH% output)
- ▶ Simple replacement of the sensitive element
- ▶ Outstanding accuracy (1.5%) for RH%

Sensor for measuring the air temperature and relative humidity in indoor environments or inside pipes. In applications with dirty air, it is possible to mount the sensor inside the DYA225 shelter in order to prevent dirt from accumulating directly on the sensitive element.

### Technical Specifications

PN	EXP815.1	DMA975.1	DMA875.1
<b>Measurements</b>	°C/RH%	°C/RH%	°C/RH%
<b>Output</b>	Radio	RS485	2x0-4...20 mA
<b>Frequency</b>	868 MHz	-	-
<b>Radio transmission power</b>	25 ± 3 mW	-	-
<b>Radio transmission distance (line-of-sight)</b>	600 m	-	-
<b>Transmission rate</b>	10'	-	-
<b>Battery life</b>	>2 years	-	-
<b>Protocol</b>	-	Modbus RTU®, TTY-ASCII	-
<b>Configuration</b>	-	Hyperterminal	-
<b>RS485 protection</b>	-	Galvanic insulation (3 kV, UL1577)	-
<b>RS485 speed</b>	-	1200...115 kbps	-

PN	EXP815.1	DMA975.1	DMA875.1
<b>Power supply</b>	Battery (AA 3,6 V)	10...30 Vac/dc	10...30 Vac/dc
<b>Power consumption</b>	<10 $\mu$ W stand-by 120 mW in trasmissione	1 W	1 W
<b>Electric protections</b>	NO (electrically insulated system)	Tranzorb and Emifilter	Tranzorb and Emifilter

### Common Technical Specifications

<b>Temperature</b>	Principle	RTD Pt100 1/3 DIN B (Class AA EN60751)
	Measuring range	Programmable: -40...60°C, -50...60°C, -50...70°C, -30...100°C
	Accuracy	0.1°C (@0°C)
	Resolution	0.01°C
	Response time (T90)	Typical 4 s (1 m/sec air flow)
	Long term stability	<0.1°C/year
<b>Relative Humidity</b>	Principle	Capacitive
	Measuring range	0...100%
	Accuracy	$\pm$ 1% (@5...95%)
	Output	Programmable: RH% or Dew Point
	Long term stability	< $\pm$ 1% / year
	Response time (T90)	Typical 10 s (1 m/s air flow)
	Hysteresis	<1%
	Resolution	0.1%
<b>General Information</b>	Protection rate	IP65
	Operative temperature	-50...100°C

### Accessories

	<b>SVICA0003</b>	ISO9001 type calibration certificate (Temperature)
	<b>SVACA0006</b>	ISO17025-ACCREDIA type calibration certificate (Temperature)
	<b>SVICA1003</b>	ISO9001 type calibration certificate (Relative Humidity)
	<b>SVACA1005.1</b>	ISO17025-ACCREDIA type calibration certificate (Relative Humidity)
	<b>DWA505A</b>	Cable L= 5 m
	<b>DWA510A</b>	Cable L= 10 m
	<b>DWA525A</b>	Cable L= 25 m
	<b>DWA526A</b>	Cable L= 50 m
	<b>DWA527A</b>	Cable L= 100 m
	<b>MG2251.R</b>	7 pin free female connector
	<b>ML3015</b>	Sensitive element (spare part) for DMA815.1-875.1. EXP815.1
	<b>EXP301</b>	Radio signal receiver from EXP815.1 radio sensor. Output compatible with data loggers (M/E-Log) Maximum number of receivable sensors: 200 Battery: NiCd 9 V Power supply: 12 Vdc Connection cable to data logger: DWA601
	<b>DYA225</b>	Open well for T+RH% sensors when mounted in ducts in presence of dirty air flow. Material: Iron Dimensions: L= 200 mm Ø 92 mm Support plate: 120x120 mm